Why are workers getting smaller pieces of the pie?

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It's one of the biggest economic changes in recent decades: Workers get a smaller slice of company revenue, while a larger share is paid to capital owners and distributed as profits. Or, as economists like to say, there has

been a fall in labor's share of gross domestic product, or GDP.

A new study co-authored by MIT economists uncovers a major reason for this trend: Big companies that spend more on capital and less on workers are gaining market share, while smaller firms that spend more on workers and less on capital are losing market share. That change, the researchers say, is a key reason why the labor share of GDP in the U.S. has dropped from around 67 percent in 1980 to 59 percent today, following decades of stability.

"To understand this phenomenon, you need to understand the reallocation of economic activity across firms," says MIT economist David Autor, co-author of the paper. "That's our key point."

To be sure, many economists have suggested other hypotheses, including new generations of software and machines that substitute directly for workers, the effects of international trade and outsourcing, and the decline of labor union power. The current study does not entirely rule out all of those explanations, but it does highlight the importance of what the researchers term "superstar firms" as a primary factor.

"We feel this is an incredibly important and robust fact pattern that you have to grapple with," adds Autor, the Ford Professor of Economics in MIT's Department of Economics.

The paper, "The Fall of the Labor Share and the Rise of Superstar Firms," appears in advance online form in the *Quarterly Journal of Economics*. In addition to Autor, the other authors are David Dorn, a professor of economics at the University of Zurich; Lawrence Katz, a professor of economics at Harvard University; Christina Patterson, Ph.D., a postdoc at Northwestern University who will join the faculty at the University of Chicago's Booth School of Business in July; and John Van Reenen, the Gordon Y. Billard Professor of Management and

Economics at MIT.

An economic "miracle" vanishes

For much of the 20th century, labor's share of GDP was notably consistent. As the authors note, John Maynard Keynes once called it "something of a miracle" in the face of economic changes, and the British economist Nicholas Kaldor included labor's steady portion of GDP as one of his often-cited six "stylized facts" of growth.

To conduct the study, the researchers scrutinized data for the U.S. and other countries in the Organization of Economic Cooperation and Development (OECD). The scholars used U.S. Economic Census data from 1982 to 2012 to study six economic sectors that account for about 80 percent of employment and GDP: manufacturing, retail trade, wholesale trade, services, utilities and transportation, and finance. The data includes payroll, total output, and total employment.

The researchers also used information from the EU KLEMS database, housed at the Vienna Institute for International Economic Studies, to examine the other OECD countries.

The increase in market dominance for highly competitive top firms in many of those sectors is evident in the data. In the retail trade, for instance, the top four firms accounted for just under 15 percent of sales in 1981, but that grew to around 30 percent of sales in 2011. In utilities and transportation, those figures moved from 29 percent to 41 percent in the same time frame. In manufacturing, this top-four sales concentration grew from 39 percent in 1981 to almost 44 percent in 2011.

At the same time, the average payroll-to-sales ratio declined in five of those sectors—with finance being the one exception. In manufacturing, the payroll-to-sales ratio decreased from roughly 18 percent in 1981 to

about 12 percent in 2011. On aggregate, the labor share of GDP declined at most times except the period from 1997 to 2002, the final years of an economic expansion with high employment.

But surprisingly, labor's share is not falling at the typical firm. Rather, reallocation of market share between firms is the key. In general, says Autor, the picture is of a "winner-take-most setting, where a smaller number of firms are accounting for a larger amount of economic activity, and those are firms where workers historically got a smaller share of the pie."

A key insight provided by the study is that the dynamics within industry sectors has powered the drop in the labor share of GDP. The overall change is not just the result of, say, an increase in the deployment of technology in manufacturing, which some economists have suggested. While manufacturing is important to the big picture, the same phenomenon is unfolding across and within many sectors of the economy.

As far as testing the remaining alternate hypotheses, the study found no special pattern within industries linked to changes in trade policy—a subject Autor has studied extensively in the past. And while the decline in union power cannot be ruled out as a cause, the drop in labor share of GDP occurs even in countries where unions remain relatively stronger than they do in the U.S.

Deserved market power, or not?

As Autor notes, there are nuances within the findings. Many "superstar" firms pay above-average wages to their employees; it is not that these firms are increasingly "squeezing" their workers, as he puts it. Rather, labor's share of the economic value added across the industrial sectors in the study is falling because market-leading "superstar" firms are now a

bigger piece of all economic activity.

On a related note, Autor suggests that the growth in market power is related to technological investment by firms in many sectors.

"We shouldn't presume that just because a market is concentrated—with a few leading firms accounting for a large fraction of sales—it's a market with low productivity and high prices," Autor says. "It might be a market where you have some very productive leading firms." Today, he adds, "more competition is platform-based competition, as opposed to simple price competition. Walmart is a platform business. Amazon is a platform business. Many tech companies are platform businesses. Many financial services companies are platform businesses. You have to make some huge investment to create a sophisticated service or set of offerings. Once that's in place, it's hard for your competitors to replicate."

With this in mind, Autor says we may want to distinguish whether market concentration is "the bad kind, where lazy monopolists are jacking up prices, or the good kind, where the more competitive firms are getting a larger share. To the best we can distinguish, the rise of superstar firms appears more the latter than the former. These firms are in more innovative industries—their productivity growth has developed faster, they make more investment, they patent more. It looks like this is happening more in the frontier sectors than the laggard sectors."

Still Autor adds, the paper does contain policy implications for regulators.

"Once a firm is that far ahead, there's potential for abuse," he notes. "Maybe Facebook shouldn't be allowed to buy all its competitors. Maybe Amazon shouldn't be both the host of a market and a competitor in that market. This potentially creates regulatory issues we should be looking

at. There's nothing in this paper that says everyone should just take a few years off and not worry about the issue."

"We don't think our paper is in any sense the last word on the topic," Autor notes. "We think it adds useful paragraphs to the conversation for everybody to listen to and grapple with. We've had too few facts chased by too many theories. We need more facts to allow us to adjudicate among theories."

More information: David Autor et al. The Fall of the Labor Share and the Rise of Superstar Firms*, *The Quarterly Journal of Economics* (2020). DOI: 10.1093/qje/qjaa004